

TI GENOMIC DNA CAN BE USED WITH CATIONIC METHODS FOR HIGHLY EFFICIENT  
TRANSFORMATION OF MAIZE PROTOPLASTS.

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AB Efficient delivery of genomic DNA fragments to maize protoplasts was  
obtained by new methods using the **polycation** Polybrene or  
Lipofectin cationic liposomes. Stable kanamycin-resistant secondary  
transformants were recovered after **transfection** with genomic DNA  
from a maize cell line that had previously been tagged with the bacterial  
gene neomycin phosphotransferase (nptII) in a first-round transformation.  
The frequency of secondary transformants with nptII-homologous DNA  
sequences was 3% or 6% of all randomly picked microcalli after Polybrene-  
or Lipofectin-mediated **transfection**, respectively.  
Transformation with genomic DNA by these methods may allow easy transfer of  
uncloned genes encoding desirable characteristics to crop species that can  
be regenerated from protoplasts.